REMARKS

Claims 9 and 12 are amended herein. Claims 1-8 are withdrawn from consideration based upon Applicants election, with traverse, to prosecute Group II, claims 9-12, discussed below.

Support for the amendment is found, for example, in the specification on page 7, lines 18-19 and page 14, lines 5-8. Hence, no issues of new matter are presented. Accordingly, upon entry of the Amendment claims 1-12 will be all of the claims pending in the Office Action.

I. Restriction Requirement

In the Office Action dated April 8, 2003, the Examiner imposed a restriction requirement between the following groups:

Group I: Claims 1-8, drawn to a method for measuring a thiol compound, classified in class 435, subclass 4.

Group II Claims 9-12, drawn to a thin membrane classified in class 435, subclass 287-9.

Applicants filed a Response to the Restriction Requirement on May 13, 2003, electing to prosecute Group II, claims 9-12, with traverse. A copy of the Response to the Restriction Requirement was subsequently faxed to Examiner Gitomer on August 6, 2003. In the Office Action dated August 27, 2003, the Examiner states, "the election received on May 13, 2003, has not been placed in the file but is understood to be an election of Group II, claims 9-12".

Applicants respectfully submit that in the Office Action dated August 6, 2003, the Examiner did not recognize or address Applicants traversal of the election. In view thereof,

forth in the Response filed on May 13, 2003, which is incorporated herein by reference. A copy of the Response and the stamped receipt are attached.

Further, Applicants, respectfully request rejoinder of the non-elected claims if the elected claims are found to be allowable.

II. Request for Initialed PTO 1449

The Examiner requests Applicants to confirm that all IDS's have been fully responded to. In response thereto, Applicants respectfully request the Examiner to return an initialed copy of the PTO 1449 Form filed with Information Disclosure Statement on October 28, 2002, with the next Office communication.

III. Response to the Rejection of Claims 9 and 12 Under 35 U.S.C. § 102(b)

Claims 9 and 12 are rejected under 35 U.S.C. § 102(b) over Ikeda. The Examiner asserts that Ikeda teaches a thin film containing a microparticle silver iodide emulsion at col. 59, lines 19-23.

Applicants respectfully traverse the rejection and submit that Ikeda does not disclose all elements of the claimed invention.

As previously pointed out, Ikeda is directed to a photographic photosensitive material whereas the present invention relates to a thin membrane for detecting thiol group-containing compounds in, for example, a living body tissue. Since Ikeda relates to silver halide color photographic materials, Ikeda discloses a gelatin layer containing a microparticle silver iodobromide emulsion. Therefore, Ikeda simply discloses the use of a silver halide and fails to disclose the use of metal microparticles. In this regard Applicants note that the present claims

recite "a microparticle of a metal" and a silver halide is not a metal but is a metal compound. Further, Applicants direct the Examiner's attention to sample nos. 104-109 in the table at page 17 of the specification. These samples contained microparticles of silver halide and showed light or weak color change compared to when microparticles of metal were used at page 17. Therefore the present claims are distinguished over the prior art.

Accordingly, Applicants respectfully request withdrawal of the rejection.

IV. Response to the Rejection of Claims 9 and 12 Under 35 U.S.C. § 102(b)

Claims 9 and 12 are rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by a red blood corpuscle.

The Examiner asserts that a red blood corpuscle has a thin outer membrane, iron inside, is a microparticle, has hydrophilic binders, hemoglobin is crosslinked, and would change color when reacted with an oxidizing or reducing agent.

Applicants respectfully traverse the rejection. It appears that the Examiner is asserting that red blood corpuscles have iron inside and that the corpuscles themselves are microparticles. However, the thin membrane of the present invention is not a microparticle but comprises microparticles of metal and a hydrophilic binder. Therefore, the thin membrane of the present invention, which contains microparticles of a metal, is different from red blood corpuscles.

Further, the iron itself inside the red blood corpuscle is not a microparticle. Since a single iron atom binds to hemoglobin, red blood corpuscles are structurally different from the presently claimed membrane. Thus, a red blood corpuscle does not anticipate the claimed invention.

Claim 12 , as amended, recites a particle size of 0.001 μm to 1 μm, and is further distinguished from a red blood corpuscle.

Accordingly, Applicants respectfully request withdrawal of the rejection.

IV. Response to Rejection of Claims 10-11 Under 35 U.S.C. § 103(a)

Claims 10-11 are rejected under 35 U.S.C. § 103(a) over Kerschensteiner in view of Ikeda.

Basically, the Examiner asserts that Kerschensteiner teaches detecting thiol compounds with colloidal metal sol suspensions, and that the presence of thiol compounds is determined by the color change of the colloidal solution. On page 8 lines 17-18, Kerschensteiner discloses that the colloidal metal sols have particle sizes of 10-120 nm (0.010 to 0.120 μm). However, the Examiner acknowledges that Kerschensteiner does not disclose a thin membrane.

The Examiner takes the position that it would have been obvious to one of ordinary skill in the art to detect the presence of thiol compounds with the components of Kerschensteiner on the membrane of Ikeda because it is well known in this art to perform liquid reactions on a membrane.

Applicants respectfully traverse the rejection. As noted above, the present invention relates to a thin membrane comprising microparticles of a metal and a hydrophilic binder.

Kerschensteiner relates to a method for detecting thiol-containing compounds using colloidal metal sol suspensions, which have a flocculated state, as a reagent or reaction mixtures. As stated in the previous response, monodispersed colloids flocculate in the presence of a thiol compound to provide a change of color, and therefore a dispersion of particles is used in the

process of Kerschensteiner. Therefore, an important feature of Kerschensteiner is the use of the dispersion of particles in a suspension.

In contrast, in the process of the present invention, a dried membrane is used, and the particles in the membrane are enclosed in a gel matrix of a hydrophilic polymer and their mobility is highly restricted. Thus, one of ordinary skill in the art would not be motivated to combine Kerschensteiner with Ikeda to obtain the thin membrane of the present invention.

First, as noted above, Ikeda is directed to photographic materials whereas Kerschensteiner is not (Kerschensteiner is directed to compounds, such as those in exhaled breath). Therefore, Kerschensteiner and Ikeda relate to different technical fields and are non-analogous art.

Second, in order to further distinguish the present invention from Kerschensteiner, claim 9 is amended to recite that the membrane is "dry" (support can be found, for example, at page 14, lines 5-8 of the present specification). Thus, in view of the above, one of ordinary skill in the art would not be motivated to use the colloidal metal sol of Kerschensteiner in a membrane because the purpose of using a colloidal metal sol disclosed in Kerschensteiner is to observe color by flocculation, and that purpose would be defeated. Therefore, the cited references to not render the claimed invention obvious.

Accordingly, Applicants respectfully request withdrawal of the rejection.

V. Response to Rejection of Claim 12 under 35 U.S.C. § 112, second paragraph

Claim 12 is rejected under 35 U.S.C. § 112, second paragraph. The Examiner asserts that claim 12 is an independent apparatus claim which depends from non-elected method claims which is improper.

Claim 12 is amended herein to depend from claim 9 and recite the particle size of the microparticles of the thin membrane, thereby obviating the rejection.

Accordingly, Applicants respectfully request withdrawal of the rejection.

VI. Specification

On pages 4-5 of the Office Action, the Examiner asserts that the title of the invention is not aptly descriptive, and that a new title is required that is clearly indicative of the invention to which the claims are directed.

In addition, the Examiner requires an abstract of the disclosure on a separate sheet as required by 37 CFR 1.72(b).

The title is amended to recite --A Thin Membrane for Detecting Thiol-Containing Compounds--, thereby obviating the objection.

In regard to the request for a new Abstract, Applicants note that the Abstract is on a separate sheet; however, another Abstract is submitted herein on a separate sheet in response to the Examiner's request.

Accordingly, Applicants respectfully request withdrawal of the objections to the specification.

VII. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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